C-A OPERATIONS PROCEDURES MANUAL

9.5.13 SAM-11 Small Articles Monitor

Text Pages 2 through 3

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Approved: _____*Signature on File*_____ _____
Collider-Accelerator Department Chairman   Date

D. Ryan

9.5.13 SAM-11 Small Articles Monitor

1. **Purpose**

    This procedure provides instructions in the operation of the SAM-11 Small Articles Monitor for "Informational use only" purposes to segregate potentially radioactive material in the Collider-Accelerator Department.

2. **Responsibilities**

    2.1   Personnel using the SAM-11 are responsible for contacting Radiological Control Technicians for release of material from radiologically controlled areas and in the event of an alarm, so that the article may be surveyed and tagged by qualified personnel.

    2.2   Radiological Control Technicians are responsible for troubleshooting the SAM-11 monitor, as well as responding to alarms, surveying and tagging radioactive material, and releasing material from radiologically controlled areas.

    2.3   Radiological Control Division I&C Group is responsible for maintenance and calibration of the SAM-11 monitor.

3. **Prerequisites**

    None

4. **Precautions**

    4.1   Non-Radiological Control Division personnel are neither qualified to release material from radiologically controlled areas, nor to tag articles as radioactive material.

    4.2   Use proper techniques when handling potentially radioactive material.

    4.3   The SAM-11 weighs approximately 1.4 tons. Exercise caution when opening and closing monitor doors, control door swing to avoid hitting personnel or other equipment. Gently close door to maintain switch operation.

    4.4   Contact the Facilities Support (FS) Group if moving the monitor is required so that a new calibration may be performed.

    4.5   The SAM-11 is sensitive to movements of personnel and equipment; a three foot buffer zone is recommended.

4.6   The SAM-11 is sensitive to naturally occurring radionuclides which may produce an alarm. Examples of these are K-40 and radioactive isotopes of Manganese, which are found in paper and alkaline batteries.

4.7   Avoid placing inappropriate materials in the monitor, which may include: liquids, large magnets, known radioactive material, items weighing greater than 40 lbs., and articles with significant self-shielding.

4.8   Operations of BNL programs (for example the AGS) may affect the background of the SAM-11, rendering it temporarily inoperable.

4.9   DO NOT allow articles to be in the SAM-11 monitor while the background is being updated.

5.   Procedure

5.1   Observe the monitor in "Ready" state. If the display shows "Instrument is Contaminated", "Changing Background", or is performing a "Residual Contamination Check", DO NOT use.

5.2   Open door and deposit articles to be monitored, then close door and push the start button to begin monitoring.

5.3   If article is clean, (signified by a green light, a chime, and a text message) remove it and insert another article to be monitored if desired, and repeat the process. Clean articles to be removed from radiologically controlled areas must be surveyed by Radiological Control Technicians.

5.4   If article is not clean, (signified by an alarm, a red light, and a text message) contact a Radiological Control Technician so that the material may be properly surveyed and tagged.

5.5   Extra caution shall be exercised when a "High Level Alarm" is received. The high level alarm is set ten-times higher than the low-level alarm.

6.   Documentation

None

7.   References

7.1   Instruction manual for Small Articles Monitor, Type SAM-11

8.   Attachments

None